Rejections

Rejection of Claims under 35 U.S.C. § 112

The Examiner has rejected claims 1-9 under 35 U.S.C. § 112, second paragraph as being indefinite for failing to particularly, point out and distinctly claim the subject matter which Applicant regards as the invention. Specifically, the Examiner has indicated that the term "the sequence" in claim 2 lacks antecedent basis.

In response, it is respectfully submitted that the Examiner has misread the claim. Specifically, originally filed claim 2 included the following phrases "the method of claim 1 wherein the downlink channel comprises a sequence of dwells" and "information than the other dwells of the sequence as a prerequisite to performing the load balancing step". Accordingly Applicant respectfully submits that the phrase "the sequence" has been properly introduced as a sequence earlier in the recitation of claim 2. Accordingly, originally filed claim 2 is accordance with the statute. Nonetheless, Applicant notes that claim 2 has been currently amended for other purposes; yet, this alleged antecedent basis problem still does not apply to the claim. If the Examiner still finds any antecedent basis problems with any of the amended claims, Applicant requests Examiner to contact Applicant's below signed agent to discuss same informally before preparation of a future Office Action.

Rejections of claims under 35 U.S.C. § 102

The Examiner has rejected claims 1, 2, 6 and 7 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent Number 6,658,010 issued December 2, 2003 to Enns et al. (hereinafter "Enns"). Specifically, and with reference to claims 1 and 6, the Examiner offers that Enns teaches a method and apparatus for use in

a communications system that includes the step of or a transmitter for providing steps of using a downlink channel to convey information to a group of devices and load balancing the downlink channel. Additionally, and with respect to claims 2 and 7, the Examiner offers that Enns allegedly teaches that the downlink channel comprises a sequence of dwells and each dwell having a time period and that a step of detecting that a dwell conveys more downlink information than other dwells as a prerequisite to perform load balancing.

With regard to claims 1 and 6, Applicant has hereabove cancelled these independent claims from the application; accordingly, the rejection is deemed moot.

With regard to claims 2 and 7, Applicant offers that while Enns is in the technical field of the subject invention, there are deficiencies in the exact teachings of Enns. "Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim" (Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co., 730 F.2d 1452, 221 USPQ 481, 485 (Fed. Cir. 1984) (citing Connell v. Sears, Roebuck & Co., 722 F.2d 1542, 220 USPQ 193 (Fed. Cir. 1983)) (emphasis added). Enns fails to disclose each and every element of the claimed invention, as arranged in the claim.

The Examiner has expanded upon the claim language to force the teachings of the prior art to fit the claimed element, and thereby support the conclusion of anticipation. Such action is not permissible. The prior art must be such that a person of ordinary skill in the field of the invention would consider there to be no difference between the claimed invention and the reference disclosure. Scripps Clinic & Research Foundation v. Genentech, Inc., 927 F.2d 1565, 18 USPQ 2d 1001, 1010 (Fed. Cir. 1991). In other words, the prior art reference must put the claimed invention in the hand of one skilled in the art. In re Donohue, 766 F.2d 531, 533, 226 USPQ 619, 621 (Fed. Cir. 1985).

Initially, and for sake of clarity, Applicant has amended claims 2 and 7 to more specifically recite that which applicant considers the invention. Additionally,

Applicant respectfully submits that Enns does not teach, disclose or suggest the step of detecting that at least one dwell of the sequence conveys more downlink information than other dwells of the sequence as a prerequisite to performing the load balancing step. Specifically, the Examiner has offered Col. 12, lines 11-25 and Col. 13, lines 33-47 to support his position with respect to this specific nature of the rejection. In response, Applicant notes that Col. 12, lines 11-25 are part of a paragraph that begins at Col. 12, line 4 that introduces the functions performed by remote devices 72 and 74 of Enns. Such devices 72 and 74 are seen in Fig. 4A and introduced at Col. 10, lines 55 -65 which identify them as remote interface devices that include among other things subscriber terminal equipment such as receivers and transmitters. The specific portion of Enns cited by the Examiner discusses functions performed by these remote devices in the upstream mode. Such functions include changing upstream frequency to optimize same and adjusting upstream data rates (lines 14-16). Accordingly, it is respectfully submitted that this has absolutely no bearing or specific teaching on detecting the amount of downlink information that may exist in one dwell over other dwells in accordance with the specific invention. That is, there is no connection made between the upstream signals and any resultant downlink data rate in this cited section of Enns.

Additionally, the Examiner has cited Col. 13, lines 33-47; however, it is respectfully submitted that this cited section of Enns speaks only of communication failures and error correcting of downstream signals. It is respectfully submitted that error checking is a very different aspect of network management tasks than load balancing and as such, this cited passage does not teach or disclose any aspect of the pending claims 2 and 6. That is, there is no specific teaching or suggestion at Col. 13, lines 33-47 of checking the amount of downlink information in one dwell as compared to other dwells in accordance with the pending claims.

Additionally, the Examiner cites Col. 14, lines 1-4 to further substantiate his position with regards to claim 7. However, it is respectfully submitted that the

Examiner has not properly interpreted this portion of the reference. That is, the subject invention claims management of a single downlink channel by comparing the amount of information within each dwell in that individual channel. Enns offers "channel balancing" amongst a group of multiple channels to allow for reserving bandwidth for selected clients sessions (Col. 4, lines 3 and 4). This aspect is further substantiated at Col. 14, lines 25-35 in that the "load balancing" of Enns is with regard to balancing information between different downstream channels and not between dwells of a single channel.

As such, the Applicants submit that claims 2 and 7 are not anticipated and fully satisfy the requirements under 35 U.S.C. § 102 and are patentable thereunder. Therefore, the Applicants respectfully request that the rejection be withdrawn.

Rejection of Claims under 35 U.S.C. § 103

The Examiner has rejected claims 3-5, 8 and 9 under 35 U.S.C. § 103 as being obvious and unpatentable over Enns in further view of U.S. Patent No. 6,577,610 issued June 10, 2003 to Kronz (hereinafter "Kronz"). Specifically, the Examiner offers that Enns provides for a method of sending data to a group of N wireless endpoints over a communications channel comprising a sequence of time slots and detecting an imbalance in said time slots. But, Enns does not teach shifting some of the data from at least one time slot to another time slot for reducing the imbalance (with respect to claim 3) or a corresponding apparatus that shifts data (with respect to claim 8). However, the Examiner offers that Kronz teaches such shifting at Col. 2, lines 29-30. Further, the Examiner offers that Enns teaches that the detecting step includes the steps of measuring the amount of data in each timeslot (Col. 14, lines 28-36) and comparing the measured data between timeslots (Col. 14, lines 35-64) with respect to claim 4 and a corresponding apparatus (Col. 16, line 3-15) with respect to claims 8 and 9. Accordingly, the Examiner concludes that it would have been obvious to one

of ordinary skill in the art to combine Enns with Kronz because they both deal with load balancing a system and that Kronz would improve the functionality of Enns by introducing the ability to shift data to load balance time slots. Additionally, the Examiner gave official notice with regards to the well known features of every other time slot in half duplex systems (with respect to claims 5 and 7). The rejection in totality is respectfully traversed.

The test under 35 U.S.C. § 103 is not whether an improvement or a use set forth in a patent would have been obvious or non-obvious; rather the test is whether the claimed invention, considered as a whole, would have been obvious. Jones v. Hardy, 110 USPQ 1021, 1024 (Fed. Cir. 1984) (emphasis added). Thus, it is impermissible to focus either on the "gist" or "core" of the invention, Bausch & Lomb, Inc. v. Barnes-Hind/Hydrocurve, Inc., 230 USPQ 416, 420 (Fed. Cir. 1986) (emphasis added). Moreover, the invention as a whole is not restricted to the specific subject matter claimed, but also embraces its properties and the problem it solves. In re Wright, 6 USPQ 2d 1959, 1961 (Fed. Cir. 1988) (emphasis added).

It has been above argued and presented that Enns does not form the basis for an adequate rejection under the anticipation statute. That is, Applicant clarifies the teaching of Enns in that it discusses "channel balancing" amongst a group of multiple channels as identified in Col. 4, lines 3-35 of the reference. This is further substantiated at Col. 16, lines 7-9 (which was cited in part by the Examiner). Specifically, "samples are collected and periodically the quality of unused channels are compared to the noise floor on channels which are currently assigned to other upstream ports". Accordingly, it is respectfully submitted that Enns is teaching monitoring of different channels in upstream communication links rather than monitoring downlink channel information rates. Therefore, Enns in combination with any other secondary cited art which allegedly introduces additional features of the subject invention, but still does not address the missing elements in Enns, does not result in the claimed invention.

For example, independent claim 3 recites detecting an imbalance such

that some of the time slots convey more data than other time slots in a single communication channel and subsequently shifting some of the data from at least one time slot to another time slot for reducing the detected imbalance. Any attempted combination of Enns and a secondary reference (for example Kronz) results in a method and apparatus that monitors and or moves information between different channels; therefore, the combination of cited references will not work or perform the tasks intended by the subject invention. Additional independent claims 5, 7, 8, and 9 have similar limitations to that of claim 3. Accordingly, it is respectfully submitted that any application of Enns with a secondary reference still does not result in any of the claimed inventions of the subject application. Additionally, claim 4 depends directly from claim 3 and recites additional features thereof. The combination of Enns and any other secondary prior art still does not make the subject invention obvious in view of method and/or apparatus that does not handle balancing of data in between different time slots of a single channel in the manner claimed.

Applicant notes that two of the three basic criteria to establish the *prima facie* case of obviousness is that first, there must be some suggestion or motivation to modify the reference or combine the teachings. Second, there must be reasonable expectation of success. MPEP 706.02(j). It is respectfully submitted that the Examiner's offered motivation for combining the references (that both Enns and Kronz both deal with load balancing a system) is insubstantial to support the rejection. That is, while each reference does discuss load balancing, it has been offered above that a load balancing in Enns is different than load balancing in Kronz (with respect to inter-channel vs. intra-channel load balancing). With said inconsistencies in the cited references, there is an insubstantial motivation to combine. It is also respectfully submitted that there is not a reasonable expectation of success that the combination of cited prior art will result in the subject invention. That is, since each of the cited references discusses a different type of load balancing, it is simply not known if the combination of said references will work properly to yield the desired result.

As such, Applicants submit that claims 3-5, 8-9 are not obvious and fully satisfy the requirements under 35 U.S.C. § 103 and are patentable thereunder. Therefore, the Applicants respectfully request that the rejection be withdrawn.

CONCLUSION

Thus, the Applicants submit that claims 1-9 are in condition for allowance. Accordingly, reconsideration of this application and its swift passage to issue are earnestly solicited.

If, however, the Examiner believes that there are any unresolved issues requiring adverse final action in any of the claims now pending in the application, it is requested that the Examiner telephone Mr. Eamon J. Wall at (732) 530-9404 so that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

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Respectfully submitted,

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CERTIFICATE OF TRANSMISSION UNDER 37 C.F.R. 1.8

I hereby certify that this correspondence is being transmitted by facsimile under 37 C.F.R. §1.8 on March 24, 2004 and is addressed to Mail Stop NON-FEE Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, Facsimile No. 703-872-9306.	Janet Kondrk Signature Janet Kondrk Printed Name of Person Signing 3/24/04 Date of signature

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